

Title (en)
METAL HEATER SYSTEM

Title (de)
METALLHEIZERSYSTEM

Title (fr)
SYSTÈME DE CHAUFFAGE MÉTALLIQUE

Publication
EP 3626893 A4 20200429 (EN)

Application
EP 17909841 A 20171211

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• KR 2017014448 W 20171211

Abstract (en)
[origin: EP3626893A1] The present invention relates to a metal heater system. More specifically, the present invention relates to a metal heater system which is characterized in that a plurality of metal heaters is coupled to the surface of the lower end of a pipeline at predetermined intervals in the longitudinal direction of the pipeline and PTC heating elements inside the metal heaters conduct heat to local portions of the pipeline. Due to these characteristics, convection is generated in a fluid inside the pipeline because of the heat conducted to the local portions and thus the overall pipeline is maintained at a constant temperature, thereby efficiently preventing the freezing and bursting of the pipeline in winter.

IPC 8 full level
E03B 7/12 (2006.01); **F16L 53/35** (2018.01)

CPC (source: EP KR US)
E03B 7/12 (2013.01 - EP KR US); **F16L 53/35** (2017.12 - US); **G06Q 50/06** (2013.01 - KR); **H05B 1/023** (2013.01 - EP); **H05B 1/0244** (2013.01 - US); **H05B 3/06** (2013.01 - US); **H05B 3/141** (2013.01 - US); **F16L 53/35** (2017.12 - EP); **H05B 2203/02** (2013.01 - US)

Citation (search report)
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• [Y] US 2016076704 A1 20160317 - KEINATH BRENDON L [US]
• [Y] DE 8705746 U1 19870619
• [A] JP 3640699 B2 20050420
• [A] US 2016161316 A1 20160609 - HEILIGENSTEIN ADAM [US], et al
• [A] KR 101456428 B1 20141031
• See references of WO 2018212422A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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EP 3626893 A1 20200325; EP 3626893 A4 20200429; CA 3063029 A1 20191202; CA 3063029 C 20231031; CN 110621826 A 20191227; JP 2020521929 A 20200727; KR 101864991 B1 20180605; US 11702822 B2 20230718; US 2020332500 A1 20201022; WO 2018212422 A1 20181122

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